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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,109	01/31/2002	Daniel D. McNeil	MPT-006	6016

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EXAMINER

SANTOS, PATRICK J D

ART UNIT PAPER NUMBER

2171

DATE MAILED: 06/29/2004

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Handwritten signature or initials.

**Office Action Summary**

Application No.

10/066,109

Applicant(s)

MCNEIL, DANIEL D.

Examiner

Patrick J Santos

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/2-9-04</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 9-13, and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,799,147 to Shannon (hereafter Shannon '147) in view of U.S. Patent No. 5,604,862 to Midgely et al. (hereafter Midgely '862).

Claims 1 and 13:

Regarding Claims 1 and 13, Shannon '147 discloses: a method for backing up data in a computer system from at least one primary data source to a secondary data source, the method comprising:

- (Claim 1 and Claim 13) performing a full image backup on a plurality of data blocks stored by the at least one primary data source (Shannon '147: col. 3, lns. 6-11); and
- (Claim 1 and Claim 13) initiating an incremental backup at a predetermined interval (Shannon '147: col. 6, lns. 38-44).

However, Shannon '147 does not explicitly disclose:

- (Claim 1) comparing the modification time of each file/folder at the predetermined interval to a defined time, wherein if the modification time is earlier than the defined time, then excluding data blocks of that file/folder from the incremental backup;
- (Claim 13) comparing the modification time of each file/folder at the predetermined interval to a defined time, wherein if the modification time is later than the defined time, then including data blocks of that file/folder in the incremental backup.

Midgely '862 discloses:

- (Claim 1) comparing the modification time of each file/folder at the predetermined interval to a defined time, wherein if the modification time is earlier than the defined time, then excluding data blocks of that file/folder from the incremental backup (Midgely '862: col. 2, lns. 17-19; col. 2, lns. 37-39);
- (Claim 13) comparing the modification time of each file/folder at the predetermined interval to a defined time, wherein if the modification time is later than the defined time, then including data blocks of that file/folder in the incremental backup (Midgely '862: col. 2, lns. 17-19; col. 2, lns. 37-39).

It would have been obvious to a person having ordinary skill in the art to apply the modification time comparison of Midgely '862 as the backup criteria of Shannon '147. The motivation to accomplish said application is suggested by Midgely '862 which discloses the advantage of eliminating data already backed up from the backup application throughput, thus reducing server load (Midgely '862: col. 3, lns. 8-37).

Examiner notes Specification states that a key advantage of Applicant is the increased accuracy and speed by virtue of writing data blocks in disk order rather than file order

(Specification: p. 7, para [0023]). However, Applicant's Claims do not recite this approach as a limitation. Examiner thus notes that by since files are composed of blocks, by virtue of backing up files, Shannon '147 and Midgely '862 in combination disclose backing up blocks.

Claims 9-12 and 21-24:

Regarding Claims 9-12 and 21-24, Shannon '147 and Midgely '862 in combination disclose all the limitations of Claims 1 and 13 (supra). Additionally, Shannon '147 and Midgely '862 in combination disclose:

- (Claims 9 and 21) the incremental backup includes file system metadata thereby allowing the tracking of new, changed, renamed, and linked files/folders (Shannon '147: col. 6, lns. 17-33; Midgely '862: col. 35-41 - note that Shannon '147 requires the creation of a "new map" that reads on file system metadata, and further note that in the storage cache embodiment of Midgely '862, this new map must be copied to the remote server cache);
- (Claims 10 and 22) the full backup and the incremental backup are used to provide a point-in-time disaster recovery (Shannon '147: col. 1, lns. 8-17; Midgely '862: col. 3, lns. 11-12);
- (Claims 11 and 23) the full image backup and the incremental backup are used to keep a standby machine up-to-date as of a last backup (Shannon '147: col. 2, lns. 63-65);
- (Claims 12 and 24) the full image backup and the incremental backup are written directly over a network to a standby machine and recovered, thereby keeping the standby machine up-to-date as of a last backup (Shannon '147: col. 2, lns. 63-65; col. 3, lns. 24-33).

3. Claims 2-4 and 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon '147 and Midgely '862, in view of the publication, "Oracle 7 (TM) Server Administrator's Guide," distributed by Oracle Corporation (TM) as part of the document set for Oracle 7 (TM) Server, published 1992 (hereafter Oracle '92).

Claims 2-4 and 14-16:

Regarding Claims 2-4 and 14-16, Shannon '147 and Midgely '862 in combination disclose all the limitations of Claims 1 and 13 (supra). However, Shannon '147 and Midgely '862 in combination do not explicitly disclose:

- (Claims 2 and 14) the defined time is a time when the full image backup was performed;
- (Claims 3 and 15) the defined time is a time when a last incremental backup was performed;
- (Claims 4 and 16) the defined time is one of a first time when the full image backup was performed and a second time when a last incremental backup was performed, whichever is the more recent;

Oracle '92 discloses:

- (Claims 2 and 14) the defined time is a time when the full image backup was performed (Oracle '92: pp. 18-3, 18-18, 18-19 - note the Cumulative and Complete Export models).;
- (Claims 3 and 15) the defined time is a time when a last incremental backup was performed (Oracle '92: pp. 18-3, 18-18, 18-19 - note the Incremental Export model);
- (Claims 4 and 16) the defined time is one of a first time when the full image backup was performed and a second time when a last incremental backup was performed, whichever is the more recent (Oracle '92: pp. 18-3, 18-18, 18-19 - note Fig 18-3 on p. 18-19; in a

export schedule utilizing a mix of incremental and cumulative backups, the next checkpoint backup will be of the most recent of either of an incremental or cumulative backup);

It would have been obvious to a person having ordinary skill in the art to apply the Oracle '92 backup schedule and strategy to the Shannon '147 and Midgely '862 combination. The motivation to combine is suggested by Oracle '92 which suggests a combination of Cumulative, Complete, and Incremental exports to provide the advantage of added protection and flexibility (Oracle '92: p. 18-3, Section titled, "Export Database Data for Added Protection and Flexibility").

4. Claims 5 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon '147 and Midgely '862, in view of U.S. Patent No. 5,195,025 issued to Boecker et al. (hereafter Boecker '025).

Claims 5 and 17:

Regarding Claims 5 and 17, Shannon '147 and Midgely '862 in combination disclose all the limitations of Claims 1 and 13 (supra). However, Shannon '147 and Midgely '862 in combination do not explicitly disclose:

- (Claims 5 and 17) further including determining whether a system clock has been changed;

Boecker '025 discloses a means of automatically updating system clocks to reflect seasonal changes such as Daylight Savings Time. Specifically, Boecker '025 discloses :

- (Claims 5 and 17) further including determining whether a system clock has been changed (Boecker '025: Abstract);

It would have been obvious to a person having ordinary skill in the art to apply the Boecker '025 system clock check to the Shannon '147 and Midgely '862 combination. The motivation to combine is suggested by Boecker '025, which discloses the advantage of automating system clock changes as opposed to manual update (Boecker '025: col. 1, lns. 31-49). Further note that Midgely '862 provides a means to trigger backup policies in response to system events such as that of the system clock changes of Boecker '025 (Midgely '862: col. 2, lns. 60-62).

5. Claims 6-8 and 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shannon '147, Midgely '862, Boecker '025, in view of Oracle '92.

Claims 6 and 18:

Regarding Claims 6 and 18, Shannon '147, Midgely '862, and Boecker '025 in combination disclose all the limitations of Claims 5 and 17 (supra). However, Shannon '147, Midgely '862, and Boecker '025 in combination do not explicitly disclose:

- (Claims 6 and 18) wherein if the system clock has been changed, then returning to performing the full image backup on the plurality of data blocks.

Oracle '92 discloses:

- (Claims 6 and 18) wherein if the system clock has been changed, then returning to performing the full image backup on the plurality of data blocks (Oracle '92: pp. 18-3, 18-18, 18-19 - note the Cumulative and Complete Export models).



It would have been obvious to a person having ordinary skill in the art to apply the Oracle '92 backup schedule and strategy to the Shannon '147, Midgely '862, and Boecker '025 combination. The motivation to combine is suggested by Oracle '92 which suggests a combination of Cumulative, Complete, and Incremental exports to provide the advantage of added protection and flexibility (Oracle '92: p. 18-3, Section titled, "Export Database Data for Added Protection and Flexibility"). Note that in the Shannon '147, Midgely '862, Boecker '025, and Oracle '92 combination, Midgely '862 provides for triggering backup events from system events (Midgely '862: col. 2, lns. 60-62) such as the system clock change events of Boecker '025, which are used to implement a typical backup schedule automation such as that of Oracle '92 (Oracle '92: p. 18-19, Fig. 18-3, titled, "A Typical Export Schedule").

Claims 7-8, and 19-20:

Regarding Claims 7-8 and 19-20, Shannon '147, Midgely '862, Boecker '025, and Oracle '92 in combination disclose all the limitations of Claims 6 and 18 (supra). Additionally, Shannon '147, Midgely '862, Boecker '025, and Oracle '92 in combination disclose:

- (Claims 7 and 19) if the system clock has not been changed, then initiating the incremental backup at the predetermined interval (Oracle '92: pp. 18-3, 18-18, 18-19 - note the Incremental Export model);
- (Claims 8 and 20) if the system clock has not been changed, then comparing the modification time of each file/folder at the predetermined interval to the defined time (Oracle '92: pp. 18-3, 18-18, 18-19 - note the Incremental Export model) and (Midgely '862: col. 2, lns. 37-39 - note that in the incremental export of Midgely '862, in order to test for older files, the mod time has to be checked).


***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J.D. Santos whose telephone number is 703-305-0707. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J.D. Santos  
June 23, 2004

  
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